DYNAMIC 2D IMPOSTERS OF 3D GRAPHIC OBJECTS

Abstract of the Disclosure

2D imposters representing 3D graphical objects, such as virtual spectators in a simulated sports arena, are dynamically displayed at predefined locations relative to an arbitrarily movable camera position in a virtual space. A hierarchical data structure is created with branches corresponding to iteratively subdivided groups of imposter data structures and is used to store polygon vertices, texture data, and other 2D imposter data generated during run-time. Center locations of the hierarchically divided groupings are used to determine a common projection location within a current view volume at which each 2D imposter is projected as an oriented image from each corresponding animated 3D graphical object. Sets of contiguous 2D imposter data are determined based on currently visible groupings of predefined locations that do not require rendering as 3D graphical objects due to their distance from the camera position. Each set of contiguous 2D imposters is rendered with a single draw primitive.